



#4

SEQUENCE LISTING

<110> NEELAM, Beena et al

<120> ISOLATED HUMAN RAS-LIKE PROTEINS,
NUCLEIC ACID MOLECULES ENCODING THESE HUMAN RAS-LIKE
PROTEINS, AND USES THEREOF

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<140> 09/778,963

<141> 2001-02-08

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Cys Gly Gly Thr Gly Thr Gly Gly Ala Cys Ala Thr Ala Gly Cys Cys	2420	2425	2430
Thr Thr Cys Cys Cys Thr Thr Cys Thr Thr Cys Cys Cys Ala Gly Gly	2435	2440	2445
Ala Gly Gly Gly Cys Thr Gly Ala Ala Thr Gly Gly Cys Cys Ala Cys	2450	2455	2460
Ala Gly Ala Ala Cys Cys Ala Cys Cys Cys Cys Thr Gly Cys Cys	2465	2470	2475
Cys Cys Ala Gly Gly Cys Thr Thr Ala Ala Gly Ala Ala Ala Thr Gly	2485	2490	2495
Cys Ala Thr Gly Cys Thr Ala Gly Thr Gly Cys Cys Thr Thr Cys Cys	2500	2505	2510
Cys Cys Ala Thr Gly Thr Cys Thr Thr Ala Thr Cys Cys Thr Ala Gly	2515	2520	2525
Ala Ala Thr Cys Ala Cys Ala Gly Gly Cys Thr Cys Cys Gly Gly Gly	2530	2535	2540
Ala Ala Ala Gly Cys Cys Ala Gly Ala Thr Gly Gly Ala Thr Gly Ala	2545	2550	2555
Ala Cys Cys Ala Gly Gly Gly Ala Ala Ala Gly Ala Ala Cys Gly Gly	2565	2570	2575
Ala Thr Thr Cys Thr Cys Ala Cys Cys Ala Thr Ala Gly Ala Thr Ala	2580	2585	2590
Cys Cys Ala Thr Thr Thr Thr Thr Gly Ala Gly Ala Thr Thr Cys	2595	2600	2605
Ala Cys Cys Ala Thr Gly Thr Gly Cys Thr Gly Ala Gly Cys Cys Cys	2610	2615	2620
Thr Thr Thr Gly Cys Ala Ala Cys Ala Ala Cys Thr Cys Thr Ala Thr	2625	2630	2635
Gly Ala Ala Thr Thr Gly Gly Gly Cys Thr Cys Ala Thr Thr Thr Thr			

	2645		2650		2655
Gly Cys Ala Gly	Ala Thr Gly	Ala Gly Ala	Ala Ala Ala	Gly Thr Gly	
	2660		2665		2670
Ala Cys Thr Thr	Cys Thr Ala	Gly Ala Gly	Ala Gly Gly	Thr Thr Ala	
	2675		2680		2685
Ala Gly Cys Thr	Ala Cys Thr	Ala Gly Cys	Cys Cys Cys	Ala Ala Gly	Ala
	2690		2695		2700
Thr Cys Ala Gly	Thr Ala Gly	Cys Thr Ala	Gly Ala Gly	Gly Gly Cys	Ala
2705		2710		2715	2720
Ala Gly Gly Cys	Ala Ala Gly	Gly Gly Ala	Thr Thr Cys	Ala Ala Ala	Thr
	2725		2730		2735
Cys Cys Cys Ala	Gly Gly Ala	Gly Thr Cys	Cys Gly Gly	Thr Gly Cys	
	2740		2745		2750
Thr Thr Gly Cys	Ala Thr Ala	Ala Thr Gly	Ala Ala Ala	Gly Gly	
	2755		2760		2765
Ala Thr Gly Ala	Ala Thr Gly	Ala Cys Gly	Gly Ala Thr	Ala Thr	Ala
	2770		2775		2780
Thr Gly Ala Gly	Thr Gly Ala	Gly Thr Gly	Ala Gly Thr	Gly Gly Ala	
2785		2790		2795	2800
Thr Gly Ala Ala	Gly Gly Ala	Ala Gly Gly	Ala Gly Thr	Ala Ala Ala	
	2805		2810		2815
Gly Gly Ala Gly	Ala Gly Gly	Gly Cys Ala	Thr Gly Ala	Ala Thr Gly	
	2820		2825		2830
Ala Ala Thr Gly	Ala Gly Ala	Gly Gly Gly	Thr Ala Gly	Ala Ala Cys	
	2835		2840		2845
Thr Cys Cys Ala	Ala Gly Ala	Cys Cys Cys	Cys Thr Thr	Ala Gly Ala	
	2850		2855		2860
Ala Cys Cys Thr	Cys Gly Thr	Cys Thr Gly	Ala Thr Gly	Thr Thr Cys	
2865		2870		2875	2880
Cys Cys Ala Thr	Thr Thr Ala	Cys Ala Gly	Ala Cys Ala	Gly Ala	
	2885		2890		2895
Ala Ala Ala Cys	Thr Gly Ala	Gly Thr Cys	Cys Thr Ala	Gly Ala Cys	
	2900		2905		2910
Ala Gly Ala Gly	Gly Cys Cys	Thr Ala Gly	Ala Gly Gly	Ala Gly Gly	
	2915		2920		2925
Cys Cys Ala Ala	Gly Ala Gly	Gly Thr Gly	Gly Thr Gly	Gly Gly Gly	
	2930		2935		2940
Cys Cys Ala Gly	Gly Thr Cys	Gly Gly Gly	Gly Gly Gly	Gly Cys Cys	
2945		2950		2955	2960
Cys Thr Gly Ala	Thr Gly Cys	Cys Thr Gly	Cys Thr Thr	Cys Thr Cys	
	2965		2970		2975
Thr Cys Gly Cys	Thr Thr Thr	Gly Thr Thr	Gly Cys Ala	Gly Cys Cys	
	2980		2985		2990
Cys Cys Gly Ala	Gly Cys Cys	Ala Thr Gly	Ala Thr Gly	Ala Ala Gly	
	2995		3000		3005
Ala Cys Thr Thr	Thr Gly Thr	Cys Cys Ala	Gly Cys Gly	Gly Gly Ala	
	3010		3015		3020
Ala Cys Thr Gly	Cys Ala Cys	Gly Cys Thr	Cys Ala Gly	Thr Gly Thr	
3025		3030		3035	3040
Gly Cys Cys Cys	Gly Cys Cys	Ala Ala Ala	Ala Cys Thr	Cys Ala	
	3045		3050		3055
Thr Ala Cys Cys	Gly Cys Ala	Thr Gly Thr	Gly Gly Thr	Gly Cys	
	3060		3065		3070
Thr Gly Gly Thr	Gly Cys Cys	Thr Cys Thr	Cys Gly Gly	Gly Thr	
	3075		3080		3085
Gly Gly Gly Cys	Ala Ala Gly	Ala Gly Cys	Thr Cys Cys	Ala Thr Cys	
	3090		3095		3100

Gly	Thr	Gly	Thr	Cys	Thr	Cys	Gly	Cys	Thr	Thr	Cys	Cys	Thr	Cys	Ala
3105							3110					3115			3120
Ala	Thr	Gly	Gly	Cys	Cys	Gly	Cys	Thr	Thr	Thr	Gly	Ala	Gly	Gly	Ala
							3125								3135
Cys	Cys	Ala	Gly	Thr	Ala	Cys	Ala	Cys	Ala	Cys	Cys	Cys	Ala	Cys	Cys
							3140								3150
Ala	Thr	Cys	Gly	Ala	Gly	Gly	Ala	Cys	Thr	Thr	Cys	Cys	Ala	Cys	Cys
							3155								3165
Gly	Thr	Ala	Ala	Gly	Gly	Thr	Ala	Thr	Ala	Cys	Ala	Ala	Cys	Ala	Thr
							3170								3180
Cys	Cys	Gly	Cys	Gly	Gly	Cys	Gly	Ala	Cys	Ala	Thr	Gly	Thr	Ala	Cys
3185							3190								3200
Cys	Ala	Gly	Cys	Thr	Cys	Gly	Ala	Cys	Ala	Thr	Cys	Cys	Thr	Gly	Gly
							3205								3215
Ala	Thr	Ala	Cys	Cys	Thr	Cys	Thr	Gly	Gly	Cys	Ala	Ala	Cys	Cys	Ala
							3220								3230
Cys	Cys	Cys	Cys	Thr	Thr	Cys	Cys	Cys	Cys	Gly	Cys	Cys	Ala	Thr	Gly
							3235								3245
Cys	Gly	Cys	Ala	Gly	Gly	Cys	Thr	Gly	Thr	Cys	Cys	Ala	Thr	Cys	Cys
							3250								3260
Thr	Cys	Ala	Cys	Ala	Gly	Gly	Thr	Gly	Ala	Gly	Gly	Cys	Cys	Cys	Ala
3265							3270								3280
Cys	Thr	Gly	Gly	Thr	Gly	Cys	Cys	Thr	Gly	Gly	Gly	Cys	Thr	Gly	Gly
							3285								3295
Gly	Gly	Cys	Gly	Gly	Cys	Ala	Gly	Gly	Gly	Cys	Cys	Ala	Gly	Gly	Gly
							3300								3310
Cys	Ala	Thr	Gly	Gly	Gly	Thr	Gly	Cys	Gly	Gly	Ala	Gly	Thr	Gly	Thr
							3315								3325
Gly	Cys	Thr	Gly	Gly	Gly	Cys	Ala	Cys	Thr	Thr	Gly	Gly	Cys	Ala	Gly
							3330								3340
Thr	Thr	Thr	Gly	Cys	Ala	Thr	Ala	Gly	Ala	Cys	Thr	Thr	Gly	Cys	Ala
3345							3350								3360
Thr	Ala	Gly	Cys	Cys	Ala	Thr	Cys	Gly	Thr	Cys	Thr	Gly	Ala	Gly	Ala
							3365								3375
Cys	Ala	Gly	Gly	Cys	Gly	Thr	Cys	Ala	Thr	Cys	Cys	Cys	Thr	Gly	Cys
							3380								3390
Ala	Cys	Ala	Ala	Thr	Gly	Ala	Gly	Gly	Cys	Thr	Cys	Ala	Gly	Ala	Gly
							3395								3405
Ala	Gly	Gly	Thr	Thr	Thr	Thr	Gly	Cys	Cys	Ala	Thr	Gly	Thr	Gly	Cys
							3410								3420
Thr	Gly	Gly	Ala	Ala	Ala	Thr	Ala	Gly	Thr	Gly	Ala	Thr	Gly	Ala	Ala
3425							3430								3440
Gly	Thr	Cys	Gly	Gly	Gly	Gly	Gly	Cys	Cys	Cys	Cys	Gly	Ala	Thr	Thr
							3445								3455
Cys	Cys	Ala	Thr	Thr	Cys	Thr	Gly	Thr	Thr	Ala	Gly				

3555				3560				3565							
Cys	Cys	Cys	Thr	Gly	Gly	Cys	Thr	Gly	Cys	Thr	Gly	Cys	Thr	Thr	Thr
3570				3575				3580							
Cys	Cys	Thr	Thr	Cys	Thr	Cys	Cys	Gly	Gly	Ala	Ala	Gly	Ala	Thr	Gly
3585				3590				3595				3600			
Ala	Cys	Cys	Cys	Ala	Cys	Cys	Ala	Gly	Ala	Gly	Cys	Thr	Cys	Cys	Ala
3605				3610				3615							
Gly	Gly	Gly	Cys	Cys	Cys	Ala	Ala	Gly	Gly	Thr	Cys	Ala	Gly	Thr	Cys
3620				3625				3630							
Cys	Ala	Cys	Gly	Gly	Gly	Gly	Cys	Thr	Cys	Ala	Gly	Gly	Thr	Cys	Thr
3635				3640				3645							
Cys	Cys	Cys	Ala	Cys	Ala	Cys	Cys	Cys	Cys	Ala	Gly	Gly	Cys	Cys	Thr
3650				3655				3660							
Thr	Thr	Gly	Cys	Cys	Ala	Cys	Cys	Thr	Cys	Cys	Thr	Ala	Gly	Ala	Gly
3665				3670				3675				3680			
Ala	Gly	Gly	Thr	Ala	Ala	Gly	Gly	Gly	Cys	Ala	Gly	Gly	Ala	Cys	Cys
3685				3690				3695							
Cys	Ala	Gly	Gly	Cys	Ala	Gly	Thr	Gly	Ala	Thr	Cys	Ala	Cys	Cys	Ala
3700				3705				3710							
Ala	Ala	Gly	Gly	Gly	Ala	Ala	Gly	Gly	Gly	Gly	Gly	Cys	Thr	Thr	Gly
3715				3720				3725							
Gly	Thr	Cys	Ala	Thr	Gly	Gly	Thr	Cys	Ala	Thr	Ala	Gly	Thr	Gly	Ala
3730				3735				3740							
Thr	Gly	Gly	Thr	Gly	Ala	Thr	Gly	Gly	Cys	Ala	Cys	Thr	Ala	Gly	Cys
3745				3750				3755				3760			
Thr	Gly	Ala	Cys	Ala	Cys	Thr	Thr	Ala	Thr	Cys	Ala	Gly	Ala	Ala	Gly
3765				3770				3775							
Cys	Thr	Ala	Thr	Gly	Gly	Gly	Cys	Cys	Thr	Gly	Gly	Cys	Cys	Cys	Thr
3780				3785				3790							
Gly	Thr	Thr	Cys	Thr	Thr	Ala	Gly	Ala	Gly	Cys	Thr	Thr	Gly	Gly	Cys
3795				3800				3805							
Ala	Thr	Gly	Thr	Ala	Gly	Thr	Thr	Thr	Thr	Thr	Thr	Thr	Thr	Gly	Ala
3810				3815				3820							
Ala	Ala	Cys	Ala	Gly	Ala	Gly	Thr	Cys	Thr	Cys	Gly	Cys	Thr	Cys	Thr
3825				3830				3835				3840			
Gly	Thr	Cys	Ala	Cys	Cys	Ala	Gly	Gly	Cys	Thr	Gly	Gly	Ala	Gly	
3845				3850				3855							
Thr	Gly	Cys	Ala	Gly	Thr	Gly	Gly	Cys	Gly	Cys	Gly	Ala	Thr	Cys	Thr
3860				3865				3870							
Cys	Gly	Gly	Cys	Thr	Cys	Ala	Cys	Thr	Gly	Cys	Ala	Ala	Cys	Cys	Thr
3875				3880				3885							
Cys	Thr	Gly	Cys	Cys	Thr	Cys	Cys	Cys	Gly	Gly	Gly	Thr	Thr	Cys	Ala
3890				3895				3900							
Ala	Gly	Cys	Gly	Ala	Thr	Thr	Cys	Thr	Cys	Cys	Thr	Gly	Cys	Cys	Thr
3905				3910				3915				3920			
Cys	Ala	Gly	Thr	Cys	Cys	Cys	Cys	Cys	Ala	Ala	Gly	Thr	Ala	Gly	Cys
3925				3930				3935							
Thr	Gly	Gly	Gly	Ala	Cys	Thr	Ala	Cys	Ala	Gly	Gly	Cys	Ala	Cys	Gly
3940				3945				3950							
Thr	Gly	Cys	Cys	Ala	Cys	Cys	Ala	Thr	Gly	Cys	Cys	Cys	Gly	Gly	Cys
3955				3960				3965							
Thr	Ala	Ala	Thr	Thr	Thr	Thr	Thr	Gly	Thr	Ala	Thr	Thr	Thr	Thr	Thr
3970				3975				3980							
Thr	Ala	Cys	Thr	Ala	Gly	Ala	Gly	Ala	Cys	Gly	Gly	Gly	Ala	Thr	Thr
3985				3990				3995				4000			
Thr	Cys	Ala	Cys	Cys	Ala	Thr	Gly	Thr	Thr	Ala	Gly	Cys	Cys	Ala	Gly
4005				4010				4015							

4465		4470		4475		4480
Ala Thr Cys Thr Gly	Thr Ala Ala Gly	Ala Cys Thr Gly	Cys Ala Cys	Ala Cys		
	4485		4490		4495	
Cys Ala Cys Ala Thr	Cys Ala Ala Cys	Ala Cys Thr Cys	Ala Thr Cys			
	4500		4505		4510	
Cys Thr Ala Ala Ala	Gly Gly Gly	Ala Cys Thr Gly	Thr Gly Ala Gly			
	4515		4520		4525	
Ala Cys Thr Thr Ala	Ala Ala Thr Gly	Ala Ala Thr Gly	Ala Ala Thr			
	4530		4535		4540	
Ala Thr Ala Thr Gly	Thr Ala Ala Gly	Gly Gly Cys Gly	Cys Thr Thr Gly			
4545		4550		4555		4560
Gly Thr Gly Ala Gly	Cys Ala Gly	Ala Thr Ala Gly	Thr Ala Ala Ala			
	4565		4570		4575	
Thr Gly Cys Ala Cys	Ala Ala Thr	Ala Ala Thr Cys	Cys Cys Cys			
	4580		4585		4590	
Ala Ala Gly Thr Cys	Thr Thr Cys	Thr Gly Thr Thr	Gly Ala Gly Thr			
	4595		4600		4605	
Cys Ala Gly Cys Ala	Thr Thr Thr	Gly Cys Ala Ala	Gly Thr Gly Gly			
	4610		4615		4620	
Gly Cys Cys Thr Gly	Cys Thr Ala Cys	Gly Gly Gly Thr	Thr Thr Ala Cys			
4625		4630		4635		4640
Ala Cys Gly Ala Thr	Cys Ala Thr Thr	Thr Cys Cys Cys	Ala Ala Gly Thr			
	4645		4650		4655	
Thr Cys Ala Cys Gly	Cys Cys Cys Cys	Thr Gly Ala Ala	Gly Thr Thr			
	4660		4665		4670	
Gly Cys Thr Gly Ala	Gly Cys Ala Gly	Gly Gly Gly Ala	Thr Ala Ala Gly			
	4675		4680		4685	
Gly Gly Ala Ala Gly	Gly Ala Gly Thr	Gly Ala Gly Cys	Ala Gly Gly			
	4690		4695		4700	
Cys Ala Ala Cys Thr	Cys Thr Cys Thr	Ala Gly Gly Cys	Ala Thr Cys			
4705		4710		4715		4720
Ala Thr Thr Cys Ala	Gly Ala Thr Ala	Ala Cys Cys Cys	Cys Cys Cys			
	4725		4730		4735	
Ala Ala Cys Thr Gly	Ala Gly Gly Thr	Ala Cys Thr Thr	Cys Thr Ala			
	4740		4745		4750	
Thr Ala Cys Ala Gly	Ala Gly Ala Ala	Cys Cys Cys Ala	Thr Gly			
	4755		4760		4765	
Cys Cys Ala Cys Thr	Cys Cys Cys Ala	Gly Cys Cys Cys	Thr Gly Cys			
	4770		4775		4780	
Thr Gly Cys Cys Gly	Cys Cys Thr Thr	Gly Ala Gly Gly	Cys Cys Ala			
4785		4790		4795		4800
Ala Gly Ala Cys Thr	Gly Ala Gly Gly	Cys Thr Gly Cys	Gly Gly Gly			
	4805		4810		4815	
Gly Thr Gly Gly Cys	Cys Cys Cys Cys	Thr Cys Cys Thr	Thr Gly Ala Gly			
	4820		4825		4830	
Thr Gly Cys Thr Thr	Thr Cys Thr Thr	Cys Cys Ala Gly	Gly Gly			
	4835		4840		4845	
Cys Thr Gly Gly Cys	Thr Thr Thr Cys	Cys Gly Ala Gly	Cys Ala			
	4850		4855		4860	
Thr Cys Thr Gly Ala	Cys Cys Ala Gly	Ala Cys Ala Gly	Cys Ala			
4865		4870		4875		4880
Gly Thr Cys Ala Ala	Gly Thr Thr Cys	Thr Cys Gly Cys	Thr Cys			
	4885		4890		4895	
Cys Ala Cys Cys Cys	Gly Ala Gly Thr	Thr Thr Thr Thr	Gly Gly Ala			
	4900		4905		4910	
Gly Ala Ala Gly Gly	Gly Gly Cys Ala	Thr Gly Thr Ala	Gly Ala Thr			
	4915		4920		4925	

Ala Gly Gly Ala Gly Ala Gly Cys Cys Cys Thr Gly Gly Gly Thr Cys	4930	4935	4940
Gly Ala Cys Cys Thr Gly Thr Gly Thr Thr Cys Gly Ala Ala Thr Cys	4945	4950	4955
Cys Thr Thr Gly Cys Thr Gly Gly Gly Cys Cys Thr Cys Thr Thr Gly	4965	4970	4975
Gly Cys Thr Thr Ala Ala Ala Thr Gly Thr Gly Thr Gly Ala Cys Cys	4980	4985	4990
Ala Gly Ala Gly Gly Cys Ala Cys Ala Thr Gly Cys Ala Thr Cys Cys	4995	5000	5005
Thr Gly Thr Cys Thr Gly Ala Gly Thr Cys Thr Cys Ala Gly Cys Cys	5010	5015	5020
Thr Cys Cys Cys Cys Ala Gly Cys Cys Ala Cys Ala Cys Ala Gly Thr	5025	5030	5035
Gly Gly Gly Cys Thr Thr Ala Ala Cys Cys Thr Cys Ala Thr Ala Cys	5045	5050	5055
Cys Cys Cys Gly Cys Ala Gly Gly Gly Ala Gly Gly Cys Thr Gly Thr	5060	5065	5070
Gly Ala Gly Gly Ala Cys Thr Gly Cys Ala Ala Gly Ala Ala Gly Gly	5075	5080	5085
Cys Thr Thr Gly Thr Gly Gly Cys Gly Gly Gly Ala Gly Cys Thr Thr	5090	5095	5100
Cys Cys Ala Gly Cys Ala Cys Gly Thr Gly Ala Cys Gly Gly Gly Thr	5105	5110	5115
Ala Thr Thr Gly Cys Ala Thr Thr Gly Gly Thr Gly Thr Cys Ala Gly	5125	5130	5135
Cys Thr Cys Cys Cys Cys Cys Ala Gly Cys Cys Thr Thr Gly Gly Gly	5140	5145	5150
Gly Ala Gly Gly Gly Gly Ala Cys Thr Gly Gly Gly Thr Ala Cys Cys	5155	5160	5165
Cys Gly Cys Thr Gly Cys Ala Ala Thr Gly Ala Ala Thr Ala Ala Gly	5170	5175	5180
Gly Cys Thr Ala Ala Thr Gly Ala Cys Ala Gly Ala Gly Gly Gly Ala	5185	5190	5195
Ala Gly Gly Ala Gly Ala Gly Gly Gly Gly Ala Gly Ala Thr Gly Thr	5205	5210	5215
Ala Gly Ala Gly Ala Gly Ala Ala Gly Cys Ala Cys Ala Thr Gly	5220	5225	5230
Cys Ala Thr Ala Thr Thr Thr Thr Cys Ala Gly Cys Ala Thr Thr Ala	5235	5240	5245
Ala Thr Thr Thr Thr Cys Ala Gly Thr Gly Ala Cys Ala Cys Ala Ala	5250	5255	5260
Gly Thr Ala Ala Thr Ala Cys Cys Cys Ala Ala Ala Cys Ala Cys Ala	5265	5270	5275
Cys Cys Cys Thr Cys Cys Thr Gly Cys Ala Ala Ala Cys Gly Cys Thr	5285	5290	5295
Ala Cys Ala Gly Ala Thr Ala Ala Ala Gly Cys Thr Ala Ala Thr Gly	5300	5305	5310
Cys Cys Cys Cys Thr Thr Thr Gly Ala Cys Cys Cys Ala Thr Gly Thr	5315	5320	5325
Cys Cys Cys Cys Ala Ala Thr Cys Cys Cys Ala Gly Gly Cys Thr Cys	5330	5335	5340
Cys Thr Gly Cys Cys Cys Cys Thr Gly Cys Cys Cys Gly Gly Ala	5345	5350	5355
Gly Gly Thr Gly Gly Cys Cys Ala Cys Cys Cys Thr Gly Gly Cys Ala	5365	5370	5375
Gly Thr Cys Thr Gly Gly Cys Ala Thr Gly Gly Ala Gly Cys Cys Thr			

Thr Cys Cys Gly Gly Gly Cys Cys	5380	Thr Cys Cys Gly Thr Gly Ala Cys	5385	Thr Gly Ala Cys	5390
5395	5400	5405			
Thr Ala Cys Ala Cys Cys Gly Gly Cys Ala Thr Thr Cys Gly Thr Ala	5410	5415	5420		
Thr Thr Thr Gly Thr Ala Thr Cys Cys Cys Cys Ala Cys Ala Ala Thr	5425	5430	5435	5440	
Gly Gly Ala Gly Ala Gly Thr Ala Thr Thr Thr Thr Thr Gly Thr Cys	5445	5450	5455		
Thr Gly Thr Cys Thr Cys Thr Thr Thr Thr Thr Thr Ala Thr Gly Gly	5460	5465	5470		
Cys Gly Cys Ala Thr Ala Thr Cys Ala Thr Thr Cys Thr Gly Ala Gly	5475	5480	5485		
Cys Ala Cys Ala Gly Cys Thr Gly Thr Cys Thr Gly Ala Thr Gly Cys	5490	5495	5500		
Thr Thr Gly Thr Thr Thr Thr Thr Thr Thr Thr Cys Ala Cys Ala	5505	5510	5515	5520	
Cys Ala Cys Cys Ala Ala Cys Cys Cys Gly Thr Gly Cys Cys Thr Cys	5525	5530	5535		
Ala Thr Thr Thr Thr Cys Cys Ala Ala Cys Cys Thr Gly Gly Thr Gly	5540	5545	5550		
Gly Ala Ala Cys Cys Thr Cys Ala Thr Thr Thr Thr Thr Thr Thr Cys Ala	5555	5560	5565		
Ala Cys Cys Thr Cys Ala Thr Thr Thr Thr Cys Cys Thr Gly Cys Thr	5570	5575	5580		
Gly Cys Thr Cys Ala Gly Gly Ala Ala Ala Thr Thr Cys Thr Gly Ala	5585	5590	5595	5600	
Ala Ala Gly Cys Cys Ala Thr Thr Ala Ala Thr Thr Cys Cys Ala Cys	5605	5610	5615		
Thr Gly Cys Cys Ala Gly Cys Thr Cys Thr Thr Cys Thr Thr Cys Cys	5620	5625	5630		
Ala Gly Cys Thr Gly Cys Cys Ala Gly Ala Cys Gly Gly Gly Cys Cys	5635	5640	5645		
Gly Ala Thr Cys Thr Cys Thr Gly Ala Thr Gly Cys Thr Thr Gly Gly	5650	5655	5660		
Cys Ala Thr Cys Gly Cys Ala Gly Thr Cys Thr Cys Gly Cys Ala Thr	5665	5670	5675	5680	
Thr Thr Gly Ala Ala Thr Ala Thr Gly Thr Cys Ala Ala Gly Gly Cys	5685	5690	5695		
Cys Ala Cys Gly Ala Gly Thr Cys Cys Thr Cys Ala Gly Gly Gly Gly	5700	5705	5710		
Cys Cys Cys Cys Gly Gly Ala Thr Thr Ala Gly Cys Cys Thr Ala Ala	5715	5720	5725		
Cys Gly Gly Gly Ala Thr Gly Gly Gly Gly Thr Thr Thr Gly Gly Cys	5730	5735	5740		
Ala Gly Cys Cys Cys Ala Ala Gly Cys Ala Gly Gly Ala Ala Gly Ala	5745	5750	5755	5760	
Gly Thr Thr Gly Cys Cys Ala Ala Gly Cys Thr Gly Ala Cys Gly Cys	5765	5770	5775		
Thr Gly Cys Cys Thr Cys Gly Cys Ala Ala Gly Thr Gly Cys Cys Thr	5780	5785	5790		
Thr Thr Cys Ala Gly Ala Ala Gly Ala Gly Cys Cys Cys Ala Cys Ala	5795	5800	5805		
Cys Thr Gly Cys Ala Gly Thr Cys Cys Cys Thr Cys Cys Ala Thr	5810	5815	5820		
Cys Ala Cys Cys Thr Cys Cys Cys Ala Thr Cys Cys Ala Thr Thr Cys	5825	5830	5835	5840	

Ala Gly Gly Cys Thr Thr Cys Cys Thr Thr Gly Gly Thr Thr Ala Ala	5845	5850	5855
Cys Ala Cys Thr Gly Ala Cys Thr Gly Thr Gly Thr Gly Cys Cys Ala	5860	5865	5870
Gly Gly Cys Cys Cys Thr Gly Gly Gly Gly Ala Gly Ala Cys Cys Ala	5875	5880	5885
Gly Gly Ala Cys Gly Ala Gly Thr Gly Gly Gly Thr Gly Ala Thr Gly	5890	5895	5900
Gly Ala Ala Cys Cys Cys Thr Thr Cys Thr Cys Thr Gly Thr Gly Cys	5905	5910	5915
Cys Cys Gly Ala Gly Cys Thr Gly Thr Thr Thr Gly Gly Ala Gly Cys	5925	5930	5935
Ala Cys Ala Cys Cys Thr Thr Thr Gly Ala Thr Cys Thr Gly Gly Ala	5940	5945	5950
Cys Ala Cys Cys Ala Thr Thr Cys Thr Gly Ala Ala Thr Gly Thr Gly	5955	5960	5965
Cys Cys Ala Thr Gly Thr Gly Cys Cys Ala Thr Thr Ala Ala Ala Thr	5970	5975	5980
Gly Gly Gly Gly Gly Thr Ala Ala Ala Thr Gly Ala Thr Gly Thr Gly	5985	5990	5995
Cys Thr Cys Thr Gly Gly Gly Gly Thr Gly Cys Ala Gly Ala Gly	6005	6010	6015
Gly Ala Ala Gly Gly Thr Gly Gly Cys Ala Gly Cys Cys Ala Thr Thr	6020	6025	6030
Cys Thr Gly Cys Cys Ala Gly Ala Ala Gly Cys Thr Gly Gly Ala Ala	6035	6040	6045
Cys Thr Gly Gly Thr Thr Gly Cys Thr Thr Cys Thr Cys Thr Thr Cys	6050	6055	6060
Thr Cys Ala Ala Gly Ala Ala Thr Thr Thr Gly Gly Gly Cys Cys Ala	6065	6070	6075
Ala Thr Thr Gly Cys Thr Gly Ala Thr Thr Cys Cys Thr Cys Thr Gly	6085	6090	6095
Gly Gly Cys Cys Thr Cys Ala Gly Thr Thr Thr Cys Cys Thr Cys Ala	6100	6105	6110
Thr Cys Thr Gly Thr Gly Ala Gly Ala Cys Ala Gly Gly Gly Ala Thr	6115	6120	6125
Cys Thr Thr Gly Thr Cys Ala Cys Ala Cys Cys Ala Cys Ala Ala Gly	6130	6135	6140
Gly Cys Thr Ala Thr Cys Ala Ala Gly Ala Gly Thr Thr Thr Gly Ala	6145	6150	6155
Gly Cys Ala Ala Ala Ala Gly Thr Gly Gly Thr Thr Gly Gly Ala Cys	6165	6170	6175
Gly Cys Ala Gly Thr Gly Gly Cys Thr Cys Ala Thr Gly Cys Cys Thr	6180	6185	6190
Gly Thr Ala Ala Thr Cys Cys Cys Ala Gly Cys Thr Cys Thr Thr Thr	6195	6200	6205
Gly Gly Gly Ala Gly Gly Cys Cys Gly Ala Gly Gly Thr Gly Gly Gly	6210	6215	6220
Cys Ala Gly Ala Thr Cys Thr Cys Thr Thr Gly Ala Gly Gly Thr Cys	6225	6230	6235
Ala Gly Gly Ala Gly Thr Thr Cys Ala Ala Gly Ala Cys Cys Ala Gly	6245	6250	6255
Cys Cys Thr Gly Gly Cys Thr Ala Ala Cys Ala Cys Ala Gly Thr Gly	6260	6265	6270
Ala Ala Ala Cys Ala Cys Cys Gly Thr Cys Thr Cys Thr Ala Cys Thr	6275	6280	6285
Ala Ala Ala Ala Ala Ala Thr Ala Cys Ala Ala Ala Ala Ala Thr			

6290	6295	6300
Thr Ala Gly Cys Cys Ala Gly Gly Thr Gly Thr Gly Gly Thr Gly Ala		
6305	6310	6315
Thr Gly Gly Gly Cys Ala Cys Cys Thr Gly Thr Ala Ala Thr Cys Cys		6320
	6325	6330
Cys Ala Gly Thr Thr Ala Cys Thr Cys Gly Gly Gly Ala Gly Gly Cys		6335
	6340	6345
Thr Gly Ala Gly Gly Cys Ala Gly Gly Ala Gly Ala Ala Thr Cys Thr		6350
	6355	6360
Cys Thr Thr Gly Ala Ala Cys Cys Cys Ala Gly Gly Ala Gly Gly Thr		6365
	6370	6375
Gly Gly Ala Gly Gly Thr Thr Gly Cys Ala Gly Thr Gly Ala Gly Cys		6380
6385	6390	6395
Thr Gly Ala Gly Ala Thr Cys Thr Thr Gly Cys Cys Ala Thr Thr Gly		6400
	6405	6410
Cys Ala Thr Thr Cys Cys Ala Gly Gly Cys Thr Gly Gly Gly Cys Ala		6415
	6420	6425
Ala Cys Ala Ala Gly Ala Gly Thr Gly Ala Ala Ala Cys Thr Cys Thr		6430
	6435	6440
Gly Thr Cys Thr Cys Ala Gly Ala Ala Ala Ala Thr Ala Ala Ala Thr		6445
	6450	6455
Ala Ala Ala Thr Ala Ala Ala Thr Ala Ala Ala Thr Ala Ala Ala Ala		6460
6465	6470	6475
Ala Ala Thr Ala Gly Cys Thr Ala Gly Gly Cys Ala Thr Gly Gly Thr		6480
	6485	6490
Gly Ala Cys Ala Gly Gly Cys Gly Cys Cys Thr Gly Thr Ala Ala Thr		6495
	6500	6505
Cys Cys Cys Ala Gly Cys Thr Gly Cys Thr Cys Cys Ala Gly Ala Gly		6510
	6515	6520
Gly Cys Thr Gly Ala Gly Gly Cys Ala Gly Gly Ala Gly Ala Ala Thr		6525
	6530	6535
Cys Gly Cys Thr Thr Ala Ala Ala Cys Cys Cys Ala Gly Gly Ala Gly		6540
6545	6550	6555
Gly Thr Gly Gly Ala Ala Gly Thr Thr Gly Cys Ala Gly Thr Gly Ala		6560
	6565	6570
Gly Cys Cys Ala Ala Gly Ala Thr Cys Ala Cys Ala Cys Cys Ala Cys		6575
	6580	6585
Thr Gly Cys Ala Cys Thr Cys Cys Ala Gly Cys Cys Thr Gly Gly Gly		6590
	6595	6600
Cys Cys Ala Cys Ala Gly Ala Gly Ala Ala Ala Gly Ala Cys Thr Cys		6605
	6610	6615
Cys Ala Thr Cys Thr Cys Ala Ala Ala Ala Ala Ala Ala Ala Ala Ala		6620
6625	6630	6635
Ala Ala Ala Ala Ala Ala Ala Ala Ala Ala Ala Ala Ala Ala Ala Gly		6640
	6645	6650
Thr Thr Thr Ala Ala Gly Cys Ala Ala Ala Ala Gly Thr Gly Ala Gly		6655
	6660	6665
Gly Ala Ala Gly Gly Thr Gly Cys Thr Thr Ala Thr Thr Ala Ala Ala		6670
	6675	6680
Ala Gly Cys Thr Gly Gly Ala Ala Ala Thr Cys Ala Gly Gly Ala Thr		6685
	6690	6695
Gly Gly Ala Gly Gly Thr Ala Cys Cys Ala Gly Thr Cys Cys Ala Gly		6700
6705	6710	6715
Ala Cys Ala Gly Cys Thr Cys Cys Cys Ala Cys Cys Ala Cys		6720
	6725	6730
Cys Cys Cys Ala Cys Cys Gly Thr Cys Thr Cys Cys Ala Cys Ala Gly		6735
	6740	6745
		6750

Cys	Ala	Gly	Cys	Cys	Cys	Cys	Thr	Gly	Thr	Thr	Thr	Cys	Ala	Gly	Ala
	6755						6760					6765			
Thr	Thr	Cys	Ala	Cys	Ala	Ala	Gly	Cys	Cys	Thr	Gly	Cys	Cys	Thr	Thr
	6770						6775				6780				
Gly	Ala	Gly	Thr	Gly	Ala	Thr	Gly	Cys	Ala	Gly	Thr	Gly	Ala	Gly	Thr
6785					6790					6795					6800
Thr	Ala	Thr	Cys	Cys	Thr	Gly	Gly	Ala	Gly	Gly	Cys	Ala	Gly	Thr	Gly
				6805					6810					6815	
Thr	Gly	Gly	Gly	Cys	Cys	Thr	Thr	Gly	Gly	Ala	Gly	Gly	Cys	Cys	Ala
			6820					6825					6830		
Gly	Cys	Ala	Cys	Thr	Cys	Ala	Cys	Thr	Thr	Thr	Thr	Thr	Cys	Ala	Thr
	6835						6840					6845			
Cys	Cys	Thr	Ala	Thr	Gly	Ala	Thr	Thr	Thr	Ala	Thr	Thr	Thr	Gly	Ala
	6850						6855				6860				
Gly	Ala	Ala	Gly	Cys	Ala	Gly	Ala	Gly	Ala	Gly	Cys	Ala	Cys	Cys	Thr
6865					6870					6875					6880
Ala	Cys	Cys	Gly	Gly	Gly	Thr	Gly	Cys	Cys	Ala	Gly	Gly	Ala	Ala	Cys
				6885					6890					6895	
Gly	Ala	Gly	Cys	Thr	Ala	Gly	Gly	Thr	Gly	Ala	Gly	Ala	Ala	Cys	Ala
			6900					6905					6910		
Gly	Ala	Ala	Thr	Cys	Ala	Gly	Gly	Thr	Ala	Gly	Ala	Ala	Ala	Thr	Cys
		6915						6920				6925			
Thr	Cys	Ala	Gly	Cys	Cys	Thr	Ala	Gly	Cys	Cys	Ala	Cys	Ala	Cys	Gly
	6930						6935				6940				
Gly	Ala	Ala	Gly	Cys	Thr	Gly	Thr	Gly	Thr	Gly	Ala	Thr	Cys	Thr	Thr
6945					6950					6955					6960
Gly	Gly	Gly	Cys	Ala	Gly	Gly	Cys	Thr	Gly	Cys	Ala	Thr	Ala	Cys	Cys
				6965					6970					6975	
Cys	Thr	Thr	Thr	Cys	Thr	Gly	Ala	Gly	Cys	Cys	Thr	Cys	Ala	Gly	Thr
			6980					6985					6990		
Thr	Thr	Gly	Cys	Thr	Cys	Ala	Cys	Cys	Thr	Gly	Thr	Ala	Ala	Thr	Gly
		6995					7000					7005			
Cys	Ala	Ala	Ala	Gly	Gly	Thr	Ala	Ala	Cys	Ala	Ala	Ala	Ala	Thr	Cys
	7010					7015					7020				
Thr	Thr	Gly	Ala	Cys	Ala	Gly	Ala	Gly	Gly	Cys	Ala	Thr	Ala	Gly	Thr
7025					7030					7035					7040
Gly	Ala	Gly	Gly	Ala	Ala	Thr	Cys	Ala	Ala	Gly	Ala	Gly	Ala	Ala	Cys
				7045					7050					7055	
Ala	Ala	Cys	Gly	Gly	Gly	Cys	Cys	Thr	Gly	Gly	Ala	Gly	Cys	Ala	Thr
		7060						7065					7070		
Ala	Cys	Ala	Cys	Cys	Cys	Ala	Gly	Thr	Gly	Cys	Thr	Thr	Ala	Gly	Cys
		7075					7080								

										7205			7210			7215		
Ala	Cys	Ala	Gly	Ala	Gly	Ala	Ala	Ala	Cys	Thr	Gly	Ala	Gly	Gly	Thr			
			7220						7225			7230						
Thr	Ala	Cys	Ala	Gly	Ala	Gly	Gly	Thr	Thr	Thr	Cys	Gly	Thr	Gly	Ala			
			7235						7240			7245						
Thr	Cys	Thr	Gly	Cys	Cys	Cys	Ala	Ala	Gly	Thr	Cys	Thr	Gly	Cys	Thr			
			7250						7255			7260						
Gly	Gly	Cys	Ala	Gly	Cys	Thr	Ala	Ala	Gly	Cys	Gly	Gly	Ala	Thr	Gly			
			7265						7270			7275			7280			
Ala	Gly	Gly	Cys	Cys	Ala	Gly	Ala	Thr	Gly	Cys	Ala	Ala	Ala	Cys	Thr			
			7285						7290			7295						
Ala	Gly	Gly	Cys	Ala	Thr	Thr	Gly	Ala	Gly	Cys	Ala	Ala	Gly	Ala	Cys			
			7300						7305			7310						
Ala	Gly	Gly	Cys	Ala	Gly	Gly	Ala	Cys	Cys	Cys	Cys	Thr	Gly	Cys	Thr			
			7315						7320			7325						
Cys	Thr	Cys	Ala	Thr	Ala	Gly	Ala	Ala	Ala	Thr	Gly	Ala	Thr	Thr	Thr			
			7330						7335			7340						
Thr	Thr	Ala	Thr	Thr	Ala	Thr	Thr	Ala	Thr	Cys	Thr	Gly	Ala	Ala	Cys			
			7345						7350			7355			7360			
Ala	Cys	Ala	Gly	Thr	Cys	Cys	Ala	Cys	Ala	Cys	Ala	Ala	Gly	Thr	Gly			
			7365						7370			7375						
Ala	Cys	Cys	Thr	Ala	Cys	Cys	Cys	Cys	Thr	Cys	Thr	Cys	Cys	Ala	Gly			
			7380						7385			7390						
Cys	Cys	Cys	Thr	Gly	Cys	Ala	Ala	Ala	Gly	Ala	Ala	Ala	Thr	Gly	Thr			
			7395						7400			7405						
Gly	Ala	Ala	Gly	Thr	Gly	Ala	Gly	Thr	Thr	Ala	Ala	Cys	Thr	Gly	Thr			
			7410						7415			7420						
Ala	Thr	Thr	Thr	Gly	Ala	Ala	Cys	Cys	Ala	Ala	Gly	Thr	Gly	Gly	Thr			
			7425						7430			7435			7440			
Cys	Cys	Ala	Cys	Gly	Thr	Gly	Thr	Thr	Ala	Gly	Cys	Thr	Ala	Thr	Gly			
			7445						7450			7455						
Cys	Gly	Ala	Cys	Thr	Gly	Thr	Gly	Ala	Ala	Cys	Ala	Gly	Gly	Gly	Gly			
			7460						7465			7470						
Cys	Thr	Thr	Cys	Ala	Ala	Cys	Cys	Cys	Cys	Cys	Thr	Cys	Ala	Gly	Cys			
			7475						7480			7485						
Cys	Thr	Cys	Ala	Gly	Thr	Thr	Thr	Cys	Cys	Thr	Gly	Thr	Cys	Cys	Thr			
			7490						7495			7500						
Gly	Gly	Ala	Ala	Ala	Ala	Thr	Ala	Ala	Thr	Cys	Gly	Cys	Ala	Gly	Gly			
			7505						7510			7515			7520			
Gly	Ala	Gly	Ala	Ala	Thr	Ala	Ala	Thr	Cys	Gly	Cys	Ala	Gly	Cys	Thr			
			7525						7530			7535						
Ala	Cys	Cys	Cys	Cys	Gly	Ala	Ala	Gly	Ala	Gly	Thr	Cys	Gly	Cys	Thr			
			7540						7545			7550						
Gly	Thr	Gly	Thr	Ala	Gly	Gly	Thr	Thr	Ala	Ala	Ala	Gly	Cys	Ala				

Ala	Ala	Cys	Thr	Cys	Ala	Cys	Thr	Ala	Cys	Cys	Thr	Gly	Gly	Gly	Cys	
7665					7670					7675					7680	
Thr	Cys	Thr	Cys	Thr	Cys	Cys	Cys	Thr	Gly	Cys	Ala	Gly	Gly	Gly	Gly	
				7685					7690						7695	
Ala	Thr	Gly	Thr	Cys	Thr	Thr	Cys	Ala	Thr	Cys	Cys	Thr	Gly	Gly	Thr	
			7700					7705					7710			
Gly	Thr	Thr	Cys	Ala	Gly	Cys	Cys	Thr	Gly	Gly	Ala	Thr	Ala	Ala	Cys	
		7715					7720					7725				
Cys	Gly	Gly	Gly	Ala	Gly	Thr	Cys	Cys	Thr	Thr	Cys	Gly	Ala	Thr	Gly	
	7730					7735					7740					
Ala	Gly	Gly	Thr	Cys	Ala	Ala	Gly	Cys	Gly	Cys	Cys	Thr	Thr	Cys	Ala	
7745					7750					7755					7760	
Gly	Ala	Ala	Gly	Cys	Ala	Gly	Ala	Thr	Cys	Cys	Thr	Gly	Gly	Ala	Gly	
				7765					7770						7775	
Gly	Thr	Cys	Ala	Ala	Gly	Thr	Cys	Cys	Thr	Gly	Cys	Cys	Thr	Gly	Ala	
			7780					7785					7790			
Ala	Gly	Ala	Ala	Cys	Ala	Ala	Gly	Ala	Cys	Cys	Ala	Ala	Gly	Gly	Ala	
		7795					7800					7805				
Gly	Gly	Cys	Gly	Gly	Cys	Gly	Gly	Ala	Gly	Cys	Thr	Gly	Cys	Cys	Cys	
	7810					7815					7820					
Ala	Thr	Gly	Gly	Thr	Cys	Ala	Thr	Cys	Thr	Gly	Thr	Gly	Gly	Cys	Ala	
7825					7830					7835					7840	
Ala	Cys	Ala	Ala	Gly	Ala	Ala	Cys	Gly	Ala	Cys	Cys	Ala	Cys	Gly	Gly	
				7845					7850						7855	
Cys	Gly	Ala	Gly	Cys	Thr	Gly	Thr	Gly	Cys	Cys	Gly	Cys	Cys	Ala	Gly	
			7860					7865						7870		
Gly	Thr	Gly	Cys	Cys	Cys	Ala	Cys	Cys	Ala	Cys	Cys	Gly	Ala	Gly	Gly	
		7875					7880					7885				
Cys	Cys	Gly	Ala	Gly	Cys	Thr	Gly	Cys	Thr	Gly	Gly	Thr	Gly	Thr	Cys	
	7890					7895					7900					
Gly	Gly	Gly	Cys	Gly	Ala	Cys	Gly	Ala	Gly	Ala	Ala	Cys	Thr	Gly	Cys	
7905					7910					7915					7920	
Gly	Cys	Cys	Thr	Ala	Cys	Thr	Thr	Cys	Gly	Ala	Gly	Gly	Thr	Gly	Thr	
				7925					7930						7935	
Cys	Gly	Gly	Cys	Cys	Ala	Ala	Gly	Ala	Ala	Gly	Ala	Ala	Cys	Ala	Cys	
			7940					7945					7950			
Cys	Ala	Ala	Cys	Gly	Thr	Gly	Gly	Ala	Cys	Gly	Ala	Gly	Ala	Thr	Gly	
		7955					7960						7965			
Thr	Thr	Cys	Thr	Ala	Cys	Gly	Thr	Gly	Cys	Thr	Cys	Thr	Thr	Cys	Ala	
	7970					7975						7980				
Gly	Cys	Ala	Thr	Gly	Gly	Cys	Cys	Ala	Ala	Gly	Cys	Thr	Gly	Cys	Cys	
7985					7990					7995						

8115	8120	8125
Gly Cys Cys Gly Cys Cys Cys Cys Ala Gly Cys Gly Thr Cys Ala Ala		
8130	8135	8140
Cys Ala Gly Thr Gly Ala Cys Cys Thr Cys Ala Ala Gly Thr Ala Cys		
8145	8150	8155
Ala Thr Cys Ala Ala Gly Gly Cys Cys Ala Ala Gly Gly Thr Cys Cys		8160
8165	8170	8175
Thr Thr Cys Gly Gly Gly Ala Ala Gly Gly Cys Cys Ala Gly Gly Cys		
8180	8185	8190
Cys Cys Gly Thr Gly Ala Gly Ala Gly Gly Gly Ala Cys Ala Ala Gly		
8195	8200	8205
Thr Gly Cys Ala Cys Cys Ala Thr Cys Cys Ala Gly Thr Gly Ala Gly		
8210	8215	8220
Cys Gly Ala Gly Gly Gly Ala Thr Gly Cys Thr Gly Gly Gly Gly Cys		
8225	8230	8235
Gly Gly Gly Gly Cys Thr Thr Gly Gly Cys Cys Ala Gly Thr Gly Cys		8240
8245	8250	8255
Cys Thr Thr Cys Ala Gly Gly Gly Ala Gly Gly Thr Gly Gly Cys Cys		
8260	8265	8270
Cys Cys Ala Gly Ala Thr Gly Cys Cys Cys Ala Cys Thr Gly Thr Gly		
8275	8280	8285
Cys Gly Cys Ala Thr Cys Thr Cys Cys Cys Cys Ala Cys Cys Gly Ala		
8290	8295	8300
Gly Gly Cys Cys Cys Cys Gly Gly Cys Ala Gly Cys Ala Gly Thr Cys		
8305	8310	8315
Thr Thr Gly Thr Thr Cys Ala Cys Ala Gly Ala Cys Cys Thr Thr Ala		
8325	8330	8335
Gly Gly Cys Ala Cys Cys Ala Gly Ala Cys Thr Gly Gly Ala Gly Gly		
8340	8345	8350
Cys Cys Cys Cys Cys Gly Gly Gly Cys Gly Cys Thr Gly Gly Cys Cys		
8355	8360	8365
Thr Cys Cys Gly Cys Ala Cys Ala Thr Thr Cys Gly Thr Cys Thr Gly		
8370	8375	8380
Cys Cys Thr Thr Cys Thr Cys Ala Cys Ala Gly Cys Thr Thr Thr Cys		
8385	8390	8395
Cys Thr Gly Ala Gly Thr Cys Cys Gly Cys Thr Thr Gly Thr Cys Cys		8400
8405	8410	8415
Ala Cys Ala Gly Cys Thr Cys Cys Thr Thr Gly Gly Thr Gly Gly Thr		
8420	8425	8430
Thr Thr Cys Ala Thr Cys Thr Cys Cys Thr Cys Thr Gly Thr Gly Gly		
8435	8440	8445
Gly Ala Gly Gly Ala Cys Ala Cys Ala Thr Cys Thr Cys Thr Gly Cys		
8450	8455	8460
Ala Gly Cys Cys Thr Cys Ala Ala Gly Ala Gly Thr Thr Ala Gly Gly		
8465	8470	8475
Cys Ala Gly Ala Gly Ala Cys Thr Cys Ala Ala Gly Thr Thr Ala Cys		8480
8485	8490	8495
Ala Cys Cys Thr Thr Cys Cys Thr Cys Thr Cys Cys Thr Gly Gly Gly		
8500	8505	8510
Gly Thr Thr Gly Gly Ala Ala Gly Ala Ala Ala Thr Gly Thr Thr Gly		
8515	8520	8525
Ala Thr Gly Cys Cys Ala Gly Ala Gly Gly Gly Gly Thr Gly Ala Gly		
8530	8535	8540
Gly Ala Thr Thr Gly Cys Thr Gly Cys Gly Thr Cys Ala Thr Ala Thr		
8545	8550	8555
Gly Gly Ala Gly Cys Cys Thr Cys Cys Thr Gly Gly Gly Ala Cys Ala		8560
8565	8570	8575

Ala	Gly	Cys	Cys	Thr	Cys	Ala	Gly	Gly	Ala	Thr	Gly	Ala	Ala	Ala	
			8580					8585				8590			
Gly	Gly	Ala	Cys	Ala	Cys	Ala	Gly	Ala	Ala	Gly	Gly	Cys	Cys	Ala	Gly
			8595					8600				8605			
Ala	Thr	Gly	Ala	Gly	Ala	Ala	Ala	Gly	Gly	Thr	Cys	Thr	Cys	Cys	Thr
			8610					8615				8620			
Cys	Thr	Cys	Thr	Cys	Cys	Thr	Gly	Gly	Cys	Ala	Thr	Ala	Ala	Cys	Ala
8625							8630				8635				8640
Cys	Cys	Cys	Ala	Gly	Cys	Thr	Thr	Gly	Gly	Thr	Thr	Thr	Gly	Gly	Gly
				8645					8650					8655	
Thr	Gly	Gly	Cys	Ala	Gly	Cys	Thr	Gly	Gly	Gly	Ala	Gly	Ala	Ala	Cys
			8660						8665				8670		
Thr	Thr	Cys	Thr	Cys	Thr	Cys	Cys	Cys	Ala	Gly	Cys	Cys	Cys	Thr	Gly
			8675					8680				8685			
Cys	Ala	Ala	Cys	Thr	Cys	Thr	Thr	Ala	Cys	Gly	Cys	Thr	Cys	Thr	Gly
			8690					8695				8700			
Gly	Thr	Thr	Cys	Ala	Gly	Cys	Thr	Gly	Cys	Cys	Thr	Cys	Thr	Gly	Cys
8705							8710				8715				8720
Ala	Cys	Cys	Cys	Cys	Cys	Thr	Cys	Cys	Cys	Ala	Cys	Cys	Cys	Cys	Cys
					8725				8730					8735	
Ala	Gly	Cys	Ala	Cys	Ala	Cys	Ala	Cys	Ala	Cys	Ala	Ala	Gly	Thr	Thr
			8740					8745					8750		
Gly	Gly	Cys	Cys	Cys	Cys	Cys	Ala	Gly	Cys	Thr	Gly	Cys	Gly	Cys	Cys
			8755					8760				8765			
Thr	Gly	Ala	Cys	Ala	Thr	Thr	Gly	Ala	Gly	Cys	Cys	Ala	Gly	Thr	Gly
			8770					8775				8780			
Gly	Ala	Cys	Thr	Cys	Thr	Gly	Thr	Gly	Thr	Cys	Thr	Gly	Ala	Ala	Gly
8785							8790				8795				8800
Gly	Gly	Gly	Gly	Cys	Gly	Thr	Gly	Gly	Cys	Cys	Ala	Cys	Ala	Cys	Cys
				8805					8810					8815	
Thr	Cys	Cys	Thr	Ala	Gly	Ala	Cys	Cys	Ala	Cys	Gly	Cys	Cys	Cys	Ala
			8820					8825				8830			
Cys	Cys	Ala	Cys	Thr	Thr	Ala	Gly	Ala	Cys	Cys	Ala	Cys	Gly	Cys	Cys
			8835					8840				8845			
Cys	Ala	Cys	Cys	Thr	Cys	Cys	Thr	Gly	Ala	Cys	Cys	Gly	Cys	Gly	Thr
			8850					8855				8860			
Thr	Cys	Cys	Thr	Cys	Ala	Gly	Cys	Cys	Thr	Cys	Cys	Thr	Cys	Thr	Cys
8865							8870				8875				8880
Cys	Thr	Ala	Gly	Gly	Thr	Cys	Cys	Cys	Thr	Cys	Cys	Gly	Cys	Cys	Cys
				8885					8890					8895	
Gly	Ala	Cys	Ala	Gly	Thr	Thr	Gly	Thr	Gly	Cys	Thr	Thr	Thr	Gly	Thr
			8900					8905						8910	
Thr	Gly	Thr	Gly	Gly	Thr	Thr	Gly	Cys	Ala	Gly	Cys	Thr	Gly	Thr	Thr
			8915					8920					89		

9025		9030		9035		9040
Cys Cys Thr Thr	Cys Cys Thr Cys Cys	Thr Cys Cys Thr Cys Thr	Gly Cys Thr Cys			
	9045		9050		9055	
Cys Cys Ala Ala	Ala Cys Ala Gly Gly	Gly Thr Thr Thr	Cys Cys Gly			
	9060		9065		9070	
Thr Gly Gly Cys Cys	Thr Gly Thr Thr	Thr Gly Cys Ala	Gly Cys Thr			
	9075		9080		9085	
Ala Gly Ala Cys Ala	Thr Thr Gly Ala	Cys Cys Thr Cys	Cys Gly Cys			
	9090		9095		9100	
Cys Ala Thr Thr	Gly Ala Gly Cys Thr	Cys Cys Ala Cys	Gly Gly Thr			
9105		9110		9115		9120
Thr Thr Ala Cys	Ala Gly Ala Cys	Ala Ala Thr Thr	Gly Cys Ala	Cys		
	9125		9130		9135	
Ala Ala Gly Cys	Gly Thr Gly Gly	Gly Gly Thr Gly	Gly Gly Cys	Ala		
	9140		9145		9150	
Gly Gly Cys Cys	Ala Gly Gly Ala	Cys Thr Gly Cys	Thr Thr Thr			
	9155		9160		9165	
Thr Thr Thr Thr	Ala Ala Thr Gly	Cys Cys Thr Cys	Cys Ala Thr	Thr		
	9170		9175		9180	
Thr Cys Ala Cys	Ala Gly Ala Gly	Ala Thr Ala Cys	Cys Ala Cys			
9185		9190		9195		9200
Cys Gly Ala Gly	Ala Cys Thr Cys	Gly Gly Ala Gly	Gly Gly Gly	Ala		
	9205		9210		9215	
Cys Ala Cys Gly	Ala Thr Gly Ala	Gly Cys Ala Cys	Cys Ala Gly	Gly		
	9220		9225		9230	
Cys Cys Cys Cys	Ala Cys Cys Thr	Thr Thr Thr Gly	Thr Cys Cys	Cys Cys		
	9235		9240		9245	
Thr Ala Gly Cys	Ala Ala Thr Thr	Cys Ala Gly Gly	Gly Thr Ala			
	9250		9255		9260	
Cys Ala Gly Cys	Thr Cys Cys Ala	Cys Cys Thr Ala	Gly Ala Ala	Cys		
9265		9270		9275		9280
Cys Ala Gly Gly	Cys Thr Gly Cys	Cys Cys Cys Thr	Cys Thr Ala	Cys Thr		
	9285		9290		9295	
Gly Thr Gly Cys	Thr Cys Gly Thr	Thr Cys Cys Thr	Cys Ala Ala	Gly		
	9300		9305		9310	
Cys Ala Thr Thr	Thr Ala Thr Thr	Ala Ala Gly Cys	Ala Cys Cys	Thr		
	9315		9320		9325	
Ala Cys Thr Gly	Gly Gly Thr Gly	Cys Thr Gly Gly	Gly Thr Thr	Cys		
	9330		9335		9340	
Ala Cys Thr Gly	Thr Gly Thr Cys	Cys Thr Ala Gly	Gly Ala Ala	Ala		
9345		9350		9355		9360
Cys Cys Ala Ala	Gly Ala Gly Gly	Gly Thr Cys	Cys Cys Cys	Ala Gly		
	9365		9370		9375	
Thr Cys Cys Thr	Gly Gly Cys Cys	Thr Cys Thr Gly	Cys Cys Cys	Gly		
	9380		9385		9390	
Cys Cys Cys Cys	Thr Gly Cys Thr	Gly Cys Cys Cys	Cys Ala Cys	Cys		
	9395		9400		9405	
Ala Cys Cys Thr	Thr Cys Thr Gly	Cys Ala Cys Ala	Cys Ala Cys	Ala		
	9410		9415		9420	
Gly Cys Gly Gly	Thr Gly Gly Gly	Ala Gly Gly Cys	Gly Gly Gly			
9425		9430		9435		9440
Gly Ala Gly Gly	Ala Gly Cys Ala	Gly Cys Thr Gly	Gly Gly Ala	Cys		
	9445		9450		9455	
Cys Cys Ala Gly	Ala Ala Cys Thr	Gly Ala Gly Cys	Cys Thr Gly	Gly		
	9460		9465		9470	
Gly Ala Gly Gly	Gly Ala Thr Cys	Cys Gly Ala Cys	Ala Gly Ala	Ala		
	9475		9480		9485	

Ala	Ala	Gly	Cys	Thr	Cys	Ala	Gly	Gly	Gly	Cys	Gly	Gly	Thr	Cys	
9490						9495				9500					
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9505					9510					9515					9520
Gly	Ala	Thr	Thr	Gly	Gly	Gly	Cys	Thr	Ala	Thr	Gly	Cys	Thr	Gly	Gly
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			9540					9545					9550		
Ala	Gly	Gly	Cys	Ala	Thr	Gly	Gly	Thr	Gly	Gly	Gly	Thr	Thr	Thr	Thr
		9555					9560					9565			
Gly	Ala	Ala	Cys	Cys	Cys	Ala	Thr	Ala	Ala	Ala	Cys	Cys	Ala	Ala	Ala
	9570					9575				9580					
Gly	Gly	Cys	Cys	Cys	Thr	Thr	Gly	Thr	Cys	Ala	Thr	Cys	Ala	Gly	Cys
9585					9590					9595					9600
Thr	Cys	Thr	Thr	Ala	Ala	Cys	Ala	Ala	Gly	Thr	Ala	Thr	Ala	Thr	Thr
				9605					9610					9615	
Thr	Thr	Gly	Thr	Ala	Thr	Thr	Thr	Thr	Ala	Ala	Thr	Cys	Thr	Cys	Thr
			9620					9625					9630		
Cys	Thr	Ala	Ala	Ala	Cys	Ala	Thr	Ala	Thr	Thr	Gly	Ala	Ala	Gly	Thr
		9635					9640					9645			
Thr	Thr	Thr	Ala	Gly	Gly	Gly	Cys	Cys	Cys	Thr	Ala	Ala	Gly	Gly	Ala
	9650					9655				9660					
Ala	Cys	Cys	Thr	Thr	Ala	Gly	Thr	Gly	Ala	Thr	Cys	Thr	Thr	Cys	Thr
9665					9670					9675					9680
Ala	Thr	Thr	Gly	Gly	Gly	Thr	Cys	Thr	Thr	Thr	Cys	Thr	Gly	Ala	Gly
				9685					9690					9695	
Gly	Thr	Thr	Cys	Ala	Gly	Ala	Gly	Ala	Gly	Gly	Gly	Thr	Ala	Ala	Gly
			9700					9705					9710		
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	180					185					190					
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	260					265										

BIOSTATISTICS	
1. <i>Statistical Inference</i>	100%
2. <i>Probability</i>	100%
3. <i>Statistics</i>	100%
4. <i>Mathematics</i>	100%
5. <i>Computer Science</i>	100%
6. <i>Engineering</i>	100%
7. <i>Science</i>	100%
8. <i>Business</i>	100%
9. <i>Health</i>	100%
10. <i>Education</i>	100%
11. <i>Law</i>	100%
12. <i>Arts</i>	100%
13. <i>Social Sciences</i>	100%
14. <i>Humanities</i>	100%
15. <i>Physical Sciences</i>	100%
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17. <i>Earth Sciences</i>	100%
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19. <i>Interdisciplinary Studies</i>	100%
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99. <i>Unspecified</i>	100%
100. <i>Other</i>	100%

FOB050" E9B7/60

Claim	Independent	Dependent
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2.	1	
3.		1
4.	1	
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29.		
30.		
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23 Total claims

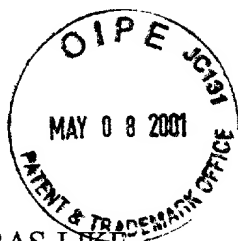
IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: NEELAM et al

Serial No. 09/778,963

Filed: February 8, 2001

For: ISOLATED HUMAN RAS-LIKE
PROTEINS, NUCLEIC ACID MOLECULES
ENCODING THESE HUMAN RAS-LIKE
PROTEINS, AND USES THEREOF



Art Unit:

Examiner:

Atty. Docket: CL001112

**SUBMISSION OF SEQUENCE LISTING
UNDER 37 C.F.R. § 1.821(a)**

Honorable Commissioner of
Patents and Trademarks
Washington, D.C. 20231

Sir:

In compliance with 37 C.F.R. § 1.821(a), Applicants submit the Sequence Listing,
including the paper copy of the Sequence Listing and the computer readable copy of the
Sequence Listing.

In the Specification:

Please enter the Sequence Listing between the specification and the claims of the
above-identified application.

09/778,963

REMARKS

In accordance with 37 C.F.R. § 1.821(f), the paper copy of the Sequence Listing and the computer readable copy of the Sequence Listing submitted herewith in the above application are the same.

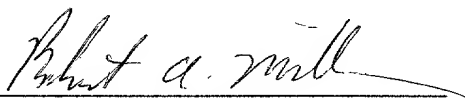
In accordance with 37 C.F.R. § 1.821(g), this submission includes no new matter.

It is respectfully believed this application is now in condition for examination.

Early notice to this effect is earnestly solicited.

Respectfully submitted,

CELERA GENOMICS

By: 
Robert A. Millman
Reg. No. 36,217

Date: May 8, 2001

Celera Genomics Corporation
45 West Gude Drive, C2-4#20
Rockville, MD 20850
Tel: 240-453-3067
Fax: 240-453-3084

103050" E 968460